

## ***Crotalaria retusa* L. var. *indica* Nampy & Sibi. (Papilionaceae) – a new variety from India**

**Sibichen M. Thomas, Santhosh Nampy and P. Nisha**

Department of Botany, St. Joseph's College, Devagiri,  
Kozhikode - 673 008, Kerala, India

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### **Abstract**

A new variety of *Crotalaria retusa* L. viz., var. *indica* Nampy & Sibi. from India is described and illustrated. A key for the identification of other varieties of the species is also included.

### **INTRODUCTION**

*Crotalaria retusa* L. (Papilionaceae) is widely distributed in Asia and Eastern Africa and exhibits considerable morphological variations, especially in vegetative characters (Polhill, 1968). Linnaeus (1753) described *C. retusa* as "foliis simplicibus oblongis cuneiformibus retusis", based on Hermann's description. Subsequently, Trimen (1894) described a variety of *C. retusa* viz., var. *maritima* from Sri Lanka. This is a prostrate, densely pubescent plant growing on sand dunes having short racemes with crowded flowers. However, this variety has not been recognised by Rudd (1991) in the revised flora of Ceylon. Meanwhile, Lima (1921) described species viz., *C. tunguensis* from Eastern Africa. It is characterized by short dense-flowered racemes with rachis elongating as the legumes begin to develop, branches with spreading straight or sometimes slightly crisped hairs, calyx subglabrous with hairs only at the base of the tube. However, Polhill (1968) reduced it to a variety of *C. retusa* on the ground that it does not have any precise geographical or ecological segregation.

During the revision of the genus *Crotalaria* in Southern Peninsular India, the authors came across an interesting specimen from CMFRI Campus, Rameswaram, Tamil Nadu. Though the specimen falls within the circumscription of *C. retusa*, it differs in certain characters, sufficient enough for varietal recognition. After a detailed study and subsequent consultation with Dr. R. M. Polhill, Royal Botanic Gardens, Kew, U.K., we concluded that it is a new variety, and is described under here the name *C. retusa* var. *indica* Nampy & Sibi.

***Crotalaria retusa* L. var. *indica* Nampy et Sibichen, var. nov. (Fig. 1).**

Type: India, Tamil Nadu, Ramanathapuram Dist.: Rameswaram, CMFRI Campus,  $\pm 5$  m, 09 Jan. 2000, Sibichen & Nampy 698 (Holo - K; Iso - CALI, SJC).

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*Crotalaria retusa* var. *indica* var. *retusae* similis, facile ramis pilis patentiter strictis vel parum curvatis, racemis longis, floribus solum distaliter arte dispositis, calyce pilis paucis ad basis extremum cetera glabro, leguminibus 2.5 - 3.5 cm longis vs 3.7 - 4.5 cm facile distinguenda.

Erect annual undershrubs, usually unbranched near the base and repeatedly branched towards apex, 0.75-1.25 m tall; stems and branches terete, fistular, brown sericeous; hairs slightly crisped. Leaves simple, alternate, stipulate, petiolate, subcoriaceous; stipule 2 mm long, subulate, tomentose; petiole 2-4 mm long, pulvinate, tomentose, non articulate; lamina 6-7.5 x 2.1-3 cm, obovate-oblongate, base attenuate, margin entire, apex obtuse, glabrous above and sparsely pubescent beneath. Racemes 10-25 cm long, 10-20-flowered, arranged laxly towards the base and densely at the apex. Flower 1.8 cm long and 1.1 cm in diameter, bracteate, bracteolate, pedicellate; bract 3-5 mm long, subulate, tomentose externally and glabrous within, margin ciliate; bracteole 1.5 mm long, subulate, produced at the base of the calyx tube; pedicel 5-6 mm long, brown tomentose. Calyx tube 4 mm long, lobes subequal, upper two lobes larger (7 mm), lower three smaller (6 mm), glabrous with hairs only at the base of the tube. Corolla yellow without striations; standard 1.5 x 1.2 cm, obovate, puberulous along the mid vein; wing petal 1.5 x 0.7 cm, oblong with basal claw, exceeding the keel, with transverse folds between the veins; keel 1 x 0.8 cm, rounded at the base with a twisted beak. Staminal sheath 5 mm long, glabrous, filaments alternately 7 and 3 mm long with ovoid (0.5 mm) and oblong (3 mm) anthers respectively. Ovary 5 x 2 mm, glabrous, stipitate; stipe 1 mm long; style 1.3 cm long, geniculate, hairy along the margin; stigma slightly expanded. Pod 3.2 x 1.2 cm oblong, shortly stalked, glabrous, green, turns black when dry, 12-18-seeded; stalk 5-7 mm long. Seeds 4 mm in diameter, pale brown, obliquely cordiform.

*Additional specimens examined:* INDIA, **Karnataka:** Castle Rock, *Sedgwick & Bell 5603* (K). **Maharashtra:** Concan, *Laws & Stocks s.n.* (K); Panchagani, *Talbot 4442* (K); *Ibid.*, Nana in *Sedgwick & Bell 7583* (K). **Tamil Nadu:** Palayamcottai, *Wight 591* (K); Ramanathapuram Dist.: Krishnathevarthoppu, *Srinivasan 63627* (MH). MALDIVE ISLANDS, Addu Atoll, Gan Islet, Eastern tip of islet, *Sigee 29* (K). (The identity of the specimens at K were confirmed by Dr. Polhill).

*Flowering and fruiting:* October-April.

*Ecology and distribution:* The new taxon was collected from an open sandy area near the Eastern coast in the Ramanathapuram District of Tamil Nadu at an altitude  $\pm$  5 m above MSL. The plants were found growing gregariously in the type locality. It is also distributed in Maharashtra and Karnataka in India, and Maldive islands (Polhill, Pers. comm., dated 2 Aug. 2002).

*Etymology:* The varietal epithet 'indica' suggests that it occurs in India.

*Notes:* *Crotalaria retusa* var. *indica* is intermediate between *C. retusa* var. *retusa* and *C. retusa* var. *tunguensis*. The var. *retusa* possesses appressed hairs on the branches, long racemes with

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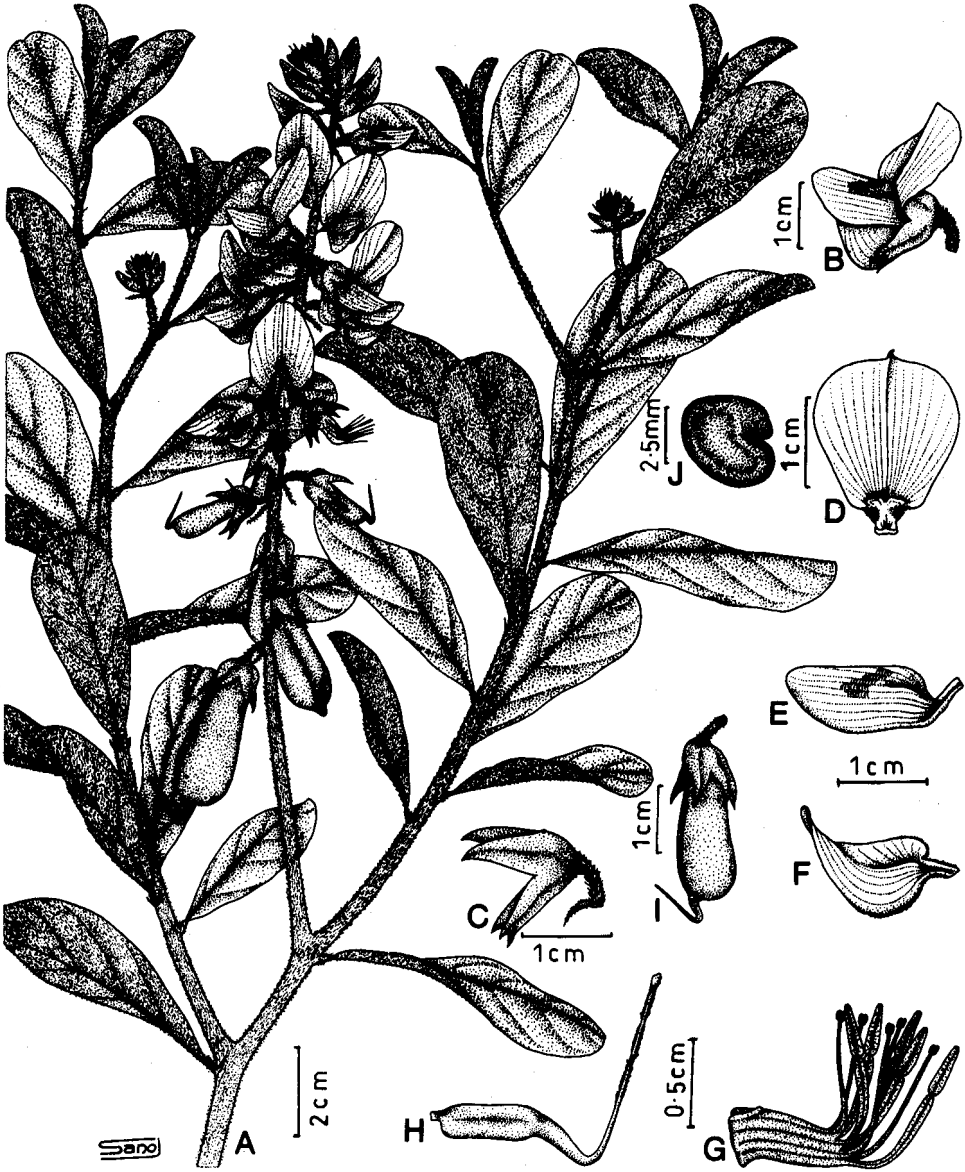


Fig. 1. *Crotalaria retusa* L. var. *indica* Nampy & Sibi.: A. Flowering twig; B. Flower; C. Calyx; D. Standard petal; E. Wing petal; F. Keel petal; G. Staminal sheath; H. Gynoeceium; I. Immature pod; J. Immature seed.

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many densely arranged flowers, and thinly but uniformly puberulous calyx. The African var. *tunguensis* has spreading, straight or slightly crisped hairs on the branches, short dense-flowering racemes, peduncle elongating during the development of fruits and subglabrous calyx with hairs only at the base (Polhill, 1968). However, in var. *indica* the hairs are spreading, straight or slightly crisped on the branches, the racemes are long with flowers densely arranged only towards apex and the calyx is glabrous.

#### Key to the varieties of *C. retusa*

1. Branches with short appressed hairs; calyx thinly puberulous ..... var. *retusa*
1. Branches with long, straight or slightly curved spreading hairs; calyx glabrous, or subglabrous with a few hairs only at the base ..... 2
2. Racemes more than 10 cm long; flowers densely arranged towards the apex; calyx glabrous; pods 2.5-3.5 cm long ..... var. *indica*
2. Racemes less than 10 cm long; flowers densely arranged throughout; calyx subglabrous; pods 4-5 cm long ..... var. *tunguensis*

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